

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION**

---

BLUE SPIKE, LLC,	§	
	§	
<i>Plaintiff,</i>	§	
	§	
v.	§	
	§	Civil Action No. 6:12-cv-499-MHS-CMC
TEXAS INSTRUMENTS, INC., et	§	
al.,	§	
	§	
<i>Defendants.</i>	§	
	§	

---

**REPORT AND RECOMMENDATION  
OF THE UNITED STATES MAGISTRATE JUDGE**

Before the Court is the following pending motion:<sup>1</sup> Defendants’ Motion for Summary Judgment of Invalidity Based on Indefiniteness Under 35 U.S.C. § 112(b) (Docket Entry # 1752). The Court, having reviewed the relevant briefing and hearing arguments on October 1, 2014, recommends Defendants’ motion should be **DENIED**.

**I. BACKGROUND**

Plaintiff Blue Spike, LLC (“Plaintiff”) brings suit alleging infringement of United States Patents Nos. 7,346,472 (“the ‘472 Patent”), 7,660,700 (“the ‘700 Patent”), 7,949,494 (“the ‘494 Patent”), and 8,214,175 (“the ‘175 Patent”) (collectively, the “Asserted Patents”). Defendants move for summary judgment, asserting claim 11 of the ‘472 Patent, claims 7, 10, and, 11 of the ‘700 Patent, claims 1, 11, 17, 21, 22, and 29 of the ‘494 Patent, and claims 8, 11, 16, and 17 of the ‘175 Patent are indefinite and therefore invalid under 35 U.S.C. § 112.

---

<sup>1</sup> The above-referenced cases were referred to the undersigned United States Magistrate Judge for pre-trial purposes in accordance with 28 U.S.C. § 636.

## II. INDEFINITENESS

Title 35 U.S.C. § 112(b) articulates that patent claims must particularly point out and distinctly claim the invention. “Whether a claim meets this definiteness requirement is a matter of law.” *Net Navigation, LLC v. Cisco Systems*, No. 4:11-cv-660, 662, 2012 WL 6161900, at \*2 (E.D. Tex. Dec. 11, 2012) (citing *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1344 (Fed. Cir. 2007)). A party challenging the definiteness of a claim must show it is invalid by clear and convincing evidence. *Id.* at 1345.

The ultimate issue is whether someone working in the relevant technical field could understand the bounds of a claim. *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010). A claim is not indefinite merely because it poses a difficult issue of claim construction. *Exxon Research & Eng’g Co. v. U.S.*, 265 F.3d 1371, 1375 (Fed. Cir. 2001).

The Supreme Court has recently held that the definiteness requirement of 35 U.S.C. § 112 “require[s] that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). “The definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable.” *Id.*

“The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.” 35 U.S.C. § 282. A “determination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Exxon*, 265 F.3d at 1376.

It is with these principles in mind the Court considers whether Defendants have demonstrated that the pleadings, affidavits, and other evidence available to the Court establish

there are no genuine issues of material fact, and they are entitled to judgment as a matter of law on these specific issues. Fed. R. Civ. P. 56(c); *see Celotex v. Catrett*, 477 U.S. 317, 332 (1986).

### III. LEVEL OF ORDINARY SKILL IN THE ART

It is well established that patents are interpreted from the perspective of one of ordinary skill in the art. *See Phillips*, 415 F.3d at 1313 (“[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.”). The Federal Circuit Court of Appeals has advised that the “[f]actors that may be considered in determining the level of skill in the art include: (1) the educational level of the inventors; (2) the type of problems encountered in the art; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) sophistication of the technology; and (6) education level of active workers in the field.” *Env’tl Designs, Ltd. v. Union Oil Co. of California*, 713 F.2d 693, 696 (Fed. Cir. 1983). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

In the claim construction briefing related to Blue Spike’s Patents, Plaintiff proposes that a person of ordinary skill in the art would have a Master’s degree in computer science or computer engineering, or equivalent experience, as well as two years experience in the field of digital fingerprinting and cryptography. (Dkt. No. 1700 at 7).<sup>2</sup> Defendants submitted declarations of three experts, each of which opine on the level of ordinary skill in the art. *See* Dkt. No. 1752-4 (Declaration of Kevin Bowyer, PH.D.); Dkt. No. 1752-6 (Declaration of John Snell); Dkt. No. 1752-8 (Declaration of Dr. Matthew Turk). Dr. Bowyer opines that a person of ordinary skill in

---

<sup>2</sup> Unless otherwise indicated, all citations to documents filed with the Court are to the ECF page number assigned by the Court’s filing system.

the art would have at least a Bachelor's degree in Electrical Engineering, Computer Science, or an equivalent degree, with a background and at least two years' experience in the fields of signal or image processing, biometric identification, and/or related fields. (Dkt. No. 1752-4 at 7). Mr. Snell opines that a person of ordinary skill in the art would have at least a Bachelor's degree in Electrical Engineering, Computer Science or an equivalent degree, with at least two years of signal or image processing experience. (Dkt. No. 1752-6 at 9). Finally, Dr. Turk opines that a person of ordinary skill in the art would have at least a bachelor's degree in electrical engineering, computer science, or equivalent degree, with a background and at least two years' experience in signal processing, image processing, biometric identification, or a related field. (Dkt. No. 1752-8 at 8).

Having considered the parties' proposals and the factors that may be considered in determining the level of skill in the art, the Court finds that a person of ordinary skill in the art would have at least a Bachelor's degree in electrical engineering, computer science, or equivalent degree, with a background and at least two years' experience in signal processing, image processing, biometric identification, or a related field.

#### **IV. DISCUSSION**

As an initial matter, the Court notes that Defendants rely on the declarations of three experts to support their arguments. (Dkt. No. 1752-4) (Declaration of Kevin Bowyer, PH.D.); (Dkt. No. 1752-6) (Declaration of John Snell); (Dkt. No. 1752-8) (Declaration of Dr. Matthew Turk). To rebut this evidence, Plaintiff relies on the declaration of one expert. (Dkt. No. 1785-10) (Declaration of Ahmed Tewfik, PH.D.). The Court has reviewed the declarations and finds this extrinsic evidence is not more persuasive than the intrinsic evidence discussed below. *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir.2009) ("While helpful, extrinsic

sources like expert testimony cannot overcome more persuasive intrinsic evidence.”).

**A. “abstract”**

The term “abstract” appears in claims 1-14 of the ‘472 Patent, claims 1, 5-7, 9-11, 13, 18, 21-22, 24-25, 30-32, 35, 40, 43-46, and 48-50 of the ‘700 Patent, claims 1, 5-7, 11, 14-17, 19-21, 24, and 27-29 of the ‘494 Patent, and claims 1-19 of the ‘175 Patent. The Court has considered the parties’ argument and determined the “claims, viewed in light of the specification . . ., inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. Specifically, the Court construed the term “abstract” to mean “a data-reduced representation of a signal that retains a perceptual relationship with the signal and differentiates the data-reduced representation from other data-reduced representations.” The reasoning for the Court’s construction is provided in the Memorandum Opinion and Order construing the disputed terms of the ‘472 Patent, the ‘700 Patent, the ‘494 Patent, and the ‘175 Patent. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the term “abstract.”

**B. “device that compares,” “comparing device,” and “device configured to determine”**

The phrase “a comparing device that compares” or the phrase “a comparing device . . . that compares” appear in claims 9, 11, and 14 of the ‘472 Patent, claims 1 and 30 of the ‘700 Patent, and claims 1 and 24 of the ‘494 Patent. The phrase “a comparing device for comparing” appears in claim 11 of the ‘494 Patent. The phrase “a device configured to determine if a query signal matches any one plurality of reference signals” appears in claim 29 of the ‘494 Patent. The Court has considered the parties’ argument and determined that the “claims, viewed in light of the specification . . ., inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. Specifically, the Court finds the phrases are

not indefinite and should be given their plain and ordinary meaning. The reasoning for the Court's finding is provided in the Memorandum Opinion and Order construing the disputed terms of the '472 Patent, the '700 Patent, the '494 Patent, and the '175 Patent. Accordingly, the Court recommends Defendants' motion for summary judgment be denied as to the phrases "a comparing device," "a device that compares," and "a device configured to determine."

**C. "similar to"**

The phrase "similar to" appears in claims 1, 3, 5, 7-11, and 17-19 of the '175 Patent. The Court has considered the parties' argument and determined the "claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus*, 134 S. Ct. at 2129. Specifically, the Court construed the term "similar to" to mean "retaining a perceptual relationship." The reasoning for the Court's construction is provided in the Memorandum Opinion and Order construing the disputed terms of the '472 Patent, the '700 Patent, the '494 Patent, and the '175 Patent. Accordingly, the Court recommends Defendants' motion for summary judgment be denied as to the terms "similar to."

**D. "wherein the system applies a cryptographic protocol," "further comprising storing the hashed abstract," and "based on the comparison step"**

**1. The Parties' Position**

Defendants contend each of the disputed phrases improperly add a method step to a system claim and therefore render the claims indefinite. (Dkt. No. 1752 at 27–32). Plaintiff responds that apparatus claims are not necessarily indefinite for using functional language. (Dkt. No. 1785 at 28.) Plaintiff adds that functional language which merely describes the capability of the claimed invention will not render a claim invalid. (Dkt. No. 1785 at 28). Plaintiff argues the claim language reveals that there is no user involved; rather there is functionality. (Dkt. No. 1785 at 30).

Defendants reply that Plaintiff is incorrect that the claims must include user action to be an impermissible mixed method and apparatus claim. (Dkt. No. 1803 at 13). Defendants further argue the method steps are not describing the configuration or capabilities of any claimed structural elements; rather, they are unattributed to any structural element and must be performed by the system as a whole in order to infringe (*e.g.*, “wherein the system applies a cryptographic protocol,” “further comprising storing the hashed abstract and/or digitally signed abstract,” “based on the comparison step”). (Dkt. No. 1803 at 13).

## **2. Analysis**

A claim may be invalid if it combines two separate statutory classes of invention. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). The problem with mixing apparatus and method steps is that such mixed claims fail to clarify “whether infringement would occur when one creates a system that allows the user to [perform the step] . . . or . . . when the user actually [performs the step].” *HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270, 1277 (Fed. Cir. 2012). “[S]uch a claim ‘is not sufficiently precise to provide competitors with an accurate determination of the ‘metes and bounds’ of protection involved’ and is ‘ambiguous and properly rejected.’” *Id.* (quoting *Ex parte Lyell*, 17 U.S.P.Q.2d 1548 (1990)).

However, apparatus claims that are limited by functional language are not necessarily indefinite. *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008) (citing *Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008)). If the functional language of the claim merely describes “the structure and capabilities of the claimed apparatus,” then the claim is sufficiently definite under 35 U.S.C. § 112 ¶2. *SynQor, Inc. v. Artesyn Techs., Inc.*, 2010 U.S. Dist. LEXIS 74808, at \*97 (E.D. Tex. July 26, 2010), *aff’d SynQor v. Artesyn Techs. Inc.*, 709 F.3d 1365 (Fed. Cir. 2013) (citing

*Microprocessor*, 520 F.3d at 1375).

a) **Claim 10 of the ‘700 Patent – “wherein the system applies a cryptographic protocol”**

The disputed phrase “wherein the system applies a cryptographic protocol” appears in claim 10 of the ‘700 Patent. Claim 10 and the claim from which it depends (claim 1) follow:

1. An electronic system for monitoring and analyzing at least one signal, comprising:
  - a first input that receives at least one reference signal to be monitored,
  - a first processor that creates an abstract of each reference signal input to said first processor through said first input wherein the abstract comprises signal characteristic parameters configured to differentiate between a plurality of versions of the reference signal;
  - a second input that receives at least one query signal to be analyzed, a second processor that creates an abstract of each query signal wherein the abstract comprises signal characteristic parameters of the query signal;
  - a reference database that stores abstracts of each at least one reference signal;
  - a comparing device that compares an abstract of said at least one query signal to the abstracts stored in the reference database to determine if the abstract of said at least one query signal matches any of the stored abstracts wherein a match indicates the query signal is a version of at least one of the reference signals.
10. The system of claim 1, **wherein the system applies a cryptographic protocol** to the abstract of said reference signal, said query signal, or both said reference signal and said query signal.

The Court finds the claim language “wherein the system applies a cryptographic protocol” does not describe a method step for using the system. Rather, this phrase is functional language used to describe the structure and capabilities of the claim components, including the “first processor” and the “second processor.” Such use of functional language is not improper. *See Microprocessor Enhancement Corp. v. Texas Instruments, Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008). *IPXL* does not apply here because the claim does not recite a method step performed by a user and does not create confusion as to when infringement occurs. Accordingly, the Court is of the opinion the disputed claims are not hybrid claims under *IPXL* and are not invalid as being indefinite. Thus the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at



2129. Accordingly, the Court recommends Defendants' motion for summary judgment be denied as to the phrase "wherein the system applies a cryptographic protocol."

**b) Claim 11 of the '700 Patent and Claim 21 of the '494 Patent – "further comprising storing the hashed abstract"**

The disputed phrase "further comprising storing the hashed abstract" appears in claim 11 of the '700 Patent and claim 21 of the '494 Patent. Claim 11 and the claims from which it depends (claims 1 and 10) follow:

1. An electronic system for monitoring and analyzing at least one signal, comprising:
  - a first input that receives at least one reference signal to be monitored,
  - a first processor that creates an abstract of each reference signal input to said first processor through said first input wherein the abstract comprises signal characteristic parameters configured to differentiate between a plurality of versions of the reference signal;
  - a second input that receives at least one query signal to be analyzed, a second processor that creates an abstract of each query signal wherein the abstract comprises signal characteristic parameters of the query signal;
  - a reference database that stores abstracts of each at least one reference signal;
  - a comparing device that compares an abstract of said at least one query signal to the abstracts stored in the reference database to determine if the abstract of said at least one query signal matches any of the stored abstracts wherein a match indicates the query signal is a version of at least one of the reference signals.
10. The system of claim 1, wherein the system applies a cryptographic protocol to the abstract of said reference signal, said query signal, or both said reference signal and said query signal.
11. The system of claim 10, wherein the cryptographic protocol is one of at least a hash or digital signature and **further comprising storing the hashed abstract** and/or digitally signed abstract.

The Court finds the claim language "further comprising storing the hashed abstract" does not describe a method step for using the system. Rather, as with the previous phrase, this phrase is functional language used to describe the structure and capabilities of the claim components, including the "reference database." Again, such use of functional language is not improper, and *IPXL* does not apply here because the claim does not recite a method step performed by a user

and does not create confusion as to when infringement occurs. Furthermore, claim 21 of the ‘494 Patent, and the claims from which it depends on, follow a very similar claim structure. Accordingly, the Court is of the opinion the disputed claims are not hybrid claims under *IPXL* and are not invalid as being indefinite. Thus the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the phrase “further comprising storing the hashed abstract.”

**c) Claim 22 of the ‘494 Patent – “based on the comparison step”**

The disputed phrase “based on the comparison step” appears in claim 22 of the ‘494 Patent. Claim 22 and the claim from which it depends (claim 11) follow:

11. A system for analyzing and identifying at least one reference signal, comprising: a first input for receiving at least one reference signal to be identified, a first processor for creating an abstract of each reference signal received based on perceptual characteristics representative of parameters to differentiate between versions of the reference signal; a reference database for storing abstracts of each reference signal received in a database; a second input for receiving at least one query signal to be identified, a second processor for creating an abstract of the received query signal based on the parameters; and a comparing device for comparing an abstract of said received query signal to the abstracts stored in the database to determine if the abstract of said received query signal is related to any of the stored abstracts.
22. The system of claim 11, further comprising a transmitter for distributing at least one signal **based on the comparison step**.

The Court finds the language “based on the comparison step” does not describe a method step for using the system. Rather, this phrase is functional language used to describe the structure and capabilities of the claim components, including the “comparing device” and the “transmitter.” Again, such use of functional language is not improper, and *IPXL* does not apply here because the claim does not recite a method step performed by a user and does not create confusion as to when infringement occurs. Accordingly, the Court is of the opinion the disputed

claims are not hybrid claims under *IPXL* and are not invalid as being indefinite.

Defendants also contend the claim is indefinite because “the comparison step” lacks antecedent basis. (Dkt. No. 1752 at 31). Claim 11 recites “a comparing device for comparing an abstract of said received query signal to the abstracts stored in the database to determine if the abstract of said received query signal is related to any of the stored abstracts.” A person of ordinary skill in the art would understand that “the comparison step” is functional language used to describe the capabilities of the “comparing device” recited in claim 11. Therefore, the Court finds the claim is not indefinite for a lack of explicit antecedent basis. Thus the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the phrase “based on the comparison step.”

***E. “index of relatedness”***

The term “index of relatedness” appears in claim 11 of the ‘472 Patent. The Court has considered the parties’ argument and determined the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129. Specifically, the Court construed the term the term “index of relatedness” to mean “an index that provides a degree of differentiation.” The reasoning for the Court’s construction is provided in the Memorandum Opinion and Order construing the disputed terms of the ‘472 Patent, the ‘700 Patent, the ‘494 Patent, and the ‘175 Patent. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the terms “similar to.”

**F. “programmed or structured to use an/said algorithm”**

**1. The Parties’ Position**

The parties dispute whether the phrases “programmed or structured to use an algorithm to generate said digital reference signal abstract from said digital reference signal” and “programmed or structured to use said algorithm to generate said digital query signal abstract from said digital query signal” are indefinite. Defendants contend that the phrases are indefinite because the specification fails to disclose an “algorithm” that a processor could use to generate a query signal or reference signal. (Dkt. No. 1752 at 24). Defendants further argue that in the absence of any such disclosure, a person of ordinary skill in the art reading the patent would have to guess whether use of a particular type of algorithm to generate an abstract would infringe. (Dkt. No. 1752 at 24). Defendants argue that because the specification does not limit the field to a particular technology, the problem is compounded. (Dkt. No. 1752 at 24). Defendants also contend that when a required structural element is claimed as an algorithm, the specification must disclose the algorithm. (Dkt. No. 1752 at 25). Defendants argue that the specification fails to disclose any algorithm. (Dkt. No. 1752 at 24). Finally, Defendants argue that term “digital query signal” lacks antecedent basis, further rendering the claim invalid as indefinite. (Dkt. No. 1752 at 25).

Plaintiff responds that the phrases are definite because the specification and claims cite to numerous algorithms that can be used in the abstract creation process. (Dkt. No. 1785 at 25). Plaintiff contends that an inventor may disclose an algorithm “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.” (Dkt. No. 1785 at 25) (citing *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (noting that “a patentee [may] express th[e] algorithm in any understandable terms including as a mathematical formula,

in prose, or as a flow chart, or in any other manner that provides sufficient structure”). Plaintiff argues that the specification notes many algorithms by name and lays out in prose a five step algorithm for producing an abstract. (Dkt. No. 1785 at 2) (citing ‘175 Patent at 7:65–9:28).

Plaintiff also argues that the specification states that “watermarking embedding algorithm” can be used to “yield information about the extent to which a data signal can be compressed while holding steadfast to the design requirement that the compressed signal maintain its perceptual relationship with the original, uncompressed signal.” (Dkt. No. 1785 at 26) (quoting ‘175 Patent at 5:33–42). Plaintiff further argues that claim 16 would have survived indefiniteness even if it had failed to list an algorithm because it is not a means-plus-function claim, and would not be subject to the requirement under 35 USC § 112 to disclose a structure. (Dkt. No. 1785 at 26). Plaintiff also contends that even if the means-plus-function restrictions applied to this term, it would still be sufficiently definite because claim 16 is a dependent claim attached to an already clear independent claim. (Dkt. No. 1785 at 26).

Defendants reply that the claim language plainly requires an algorithm to generate an abstract, and neither the claim nor the specification specifies an algorithm. (Dkt. No. 1803 at 10–11). Defendants further argue that the algorithms that Plaintiff point to are irrelevant. (Dkt. No. 1803 at 11). Defendants argue that it cannot be disputed that claim 16 of the ‘175 Patent is drafted in functional language. (Dkt. No. 1803 at 11). Defendants contend that because patent drafters can resolve the ambiguity of functional claiming “if the specification provided a formula for calculating a property” or a “quantitative metric,” courts are reluctant to permit functional limitations to cover that which the inventor did not invent. (Dkt. No. 1803 at 11) (quoting *Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1256 (Fed. Cir. 2008)). Thus, Defendants argue that there is no mention of an algorithm in the specification and claim 16

cannot permit the inventors to cover “all future improvements” to the abstract creation process. (Dkt. No. 1803 at 11–12).

## **2. Analysis**

The disputed phrases “programmed or structured to use an algorithm to generate said digital reference signal abstract from said digital reference signal” and “programmed or structured to use said algorithm to generate said digital query signal abstract from said digital query signal” appear in claim 16 of the ‘175 Patent. As an initial matter, the Court finds that the claims are not governed by means-plus-function limitations governed by 35 U.S.C. §112 ¶ 6. The phrases do not use “means,” and Defendants have failed to overcome the rebuttable presumption that § 112 ¶ 6 does not apply.

Moreover, the intrinsic evidence informs one of skill in the art, with reasonable certainty, the scope of the disputed phrases. Specifically, the specification states “the present invention incorporates what could best be described as ‘computer-acoustic’ and ‘computer-visual’ modeling, where the signal abstracts are created using data reduction techniques to determine the smallest amount of data, at least a single bit, which can represent and differentiate two digitized signal representations for a given predefined signal set.” ‘175 Patent at 10:10–17. The specification further states that “the present invention generally contemplates a signal recognition system that has at least five elements,” and then proceeds to discuss each of these elements. ‘175 at 8:3–9:40. Thus, the specification provides an exemplary algorithm in prose. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (noting that “a patentee [may] express th[e] algorithm in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure”). Thus the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus*, 134 S. Ct. at 2129.

Finally, the Court finds the lack of antecedent basis for the term “digital query signal” does not make the claim indefinite because the independent claim refers to digital reference signals, digital reference signal abstracts, and query signal abstracts. In addition, query signals are mentioned in the patent’s abstract and body numerous times. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the phrases “programmed or structured to use an algorithm to generate said digital reference signal abstract from said digital reference signal” and “programmed or structured to use said algorithm to generate said digital query signal abstract from said digital query signal.”

***G. “data describing a portion of the characteristics of its associated reference signal”***

**1. The Parties’ Position**

The parties dispute whether the phrase “data describing a portion of the characteristics of its associated reference signal” is indefinite. Defendants contend the phrase is indefinite because there is no disclosure that quantifies how much a “portion of characteristics” must be. (Dkt. No. 1752 at 25). Defendant further contend there is no specific meaning of this phrase in the art, and there is no description of what portion or how much of the characteristics, or which characteristics, of an associated reference signal must be described. (Dkt. No. 1752 at 25).

Defendants further argue the specification does not provide any guidance on what “portion” refers to. (Dkt. No. 1752 at 26). Defendants contend the specification also fails to give guidance on which “portion” of the characteristics of claim 7 of the ‘700 Patent and claim 17 of the ‘494 Patent mean. Defendants argue that both claims depend from independent claims that describe creating an abstract from presumably more than a “portion” of the characteristics of a reference or query signal. (Dkt. No. 1752 at 26). Defendants contend that the specification states that an “abstract” is created in part by selecting certain characteristics of the reference signal that remain relatively constant. (Dkt. No. 1752 at 26). Thus, according to Defendants, a person of

ordinary skill practicing the patent would need to know which portion of the characteristics was used to create the abstract, and then which portion of the first portion claims 7 and 17 refer to. (Dkt. No. 1752 at 26).

Defendants also argue that the specification fails to describe what “characteristics” might be relevant to the constitution of an abstract and how one of ordinary skill in the art could separate out a “portion” of those characteristics. (Dkt. No. 1752 at 26). Defendants note that the specification states that a “database engine” will identify “characteristics (for example, the differences) that can be used to distinguish one digital signal from all other digital signals that are stored in its collection.” (Dkt. No. 1752 at 26). But, Defendants contend that says nothing about what those characteristics might be. (Dkt. No. 1752 at 27). Defendants further argue that neither “portion” nor “characteristics” has a technical meaning in the field. (Dkt. No. 1752 at 27). Thus, according to Defendants, one of ordinary skill in the art is left to guess what “characteristics” of a signal, and what “portion” of them, are relevant to defining an abstract. (Dkt. No. 1752 at 27).

Plaintiff responds that the phrase “data describing a portion of the characteristics of its associated reference signal” should be construed as “an abstract is generated from a portion of a reference signal rather than the entire signal.” (Dkt. No. 1785 at 27). Plaintiff contends that this construction is supported by the specification which provides examples of what constitutes a “portion” in the context of characteristics of a reference signal. (Dkt. No. 1785 at 27) (citing ‘175 Patent at 11:35–41). Plaintiff further argues that there is no conflict or redundancy between the independent claim and dependent claims at issue. (Dkt. No. 1785 at 27). According to Plaintiff, the dependent claims identify distinguishing characteristics of a fraction of the original signal, while the dependent claims identify those characteristics in the entire signal.



(Dkt. No. 1785 at 27.)

Defendants reply that Plaintiff ignores the plain language of the claim—discussing portions of characteristics—and instead posits that the claim teaches that “an abstract is generated from a portion of a reference signal rather than the entire signal.” (Dkt. No. 1803 at 12) (quoting Dkt. No. 1785 at 27). Defendants contend that the claim language discusses a portion of the characteristics, not a portion of the reference signal. Thus, according to Defendants, a person of ordinary skill in the art is left to guess what “characteristics” of a signal, and what “portion” of them, are relevant to defining an abstract. (Dkt. No. 1803 at 12).

## **2. Analysis**

The disputed phrase “data describing a portion of the characteristics of its associated reference signal” appears in claim 7 of the ‘700 Patent and claim 17 of the ‘494 Patent. The Court finds that the intrinsic evidence informs one of skill in the art, with reasonable certainty, the scope of the disputed phrases. Specifically, the claim language itself recites that at least one abstract includes data that describes “a portion” of the “characteristics associated with the reference signal.” A person of ordinary skill in the art would understand the term “portion” in the context of the intrinsic evidence. Accordingly, although the term may be broad, it is not indefinite and the claims are not required to provide mathematical precision on how big or small a portion must be.

Likewise, a person of ordinary skill in the art would understand the phrase “characteristics associated with the reference signal” in the context of the intrinsic evidence. For example, the specification provides different examples of “characteristics associated with a reference signal” and how they can be used to find matches in the database. *See, e.g.*, ‘494 Patent at 14:53–58 (“The present invention, however, involves the scanning of an image involving a sun, compressing the data to its essential characteristics (i.e., those perceptual characteristics

related to the sun) and then finding matches in a database of other visual images (stored as compressed or even uncompressed data).”). Moreover, claim 18 provides a list of “characteristics of the reference signal,” which includes a perceptible characteristic, a cognitive characteristic, a subjective characteristic, a perceptual quality, a recognizable characteristic or combinations thereof.

Thus, a person of ordinary skill in the art would understand these different types of “characteristics.” Indeed, the parties have agreed to a construction for a number of these characteristics. *See*, Dkt. No. 1674 at 3 (providing agreed constructions for “perceptible characteristic,” “cognitive characteristic,” “subjective characteristic,” and “perceptual quality”). The specification further states that using these characteristics is more accurate and efficient than a text-based descriptor of the signal. ‘494 Patent at 7:60–64 (“In this manner, certain media which are commonly known by signal characteristics, a painting, a song, a TV commercial, a dialect, etc., may be analyzed more accurately, and perhaps, more efficiently than a text-based descriptor of the signal.”) Thus, the intrinsic evidence informs one of skill in the art, with reasonable certainty, the scope of the phrases meaning.

Finally, the Court does not adopt Plaintiff’s construction because it is not consistent with the claim language. Claim 7 of the ‘700 Patent and claim 17 of the ‘494 Patent each require that “stored abstracts comprise data describing *a portion of the characteristics* of its associated reference signal.” (emphasis added). Plaintiff’s construction is “an abstract is generated from *a portion of a reference signal* rather than the entire signal.” As indicated, the claim language discusses a portion of the characteristics, not a portion of the reference signal. Therefore, the Court does not adopt Plaintiff’s construction. Thus the “claims, viewed in light of the specification . . . , inform those skilled in the art about the scope of the invention with reasonable

certainty.” *Nautilus*, 134 S. Ct. at 2129. Accordingly, the Court recommends Defendants’ motion for summary judgment be denied as to the phrase “data describing a portion of the characteristics of its associated reference signal.”

## V. CONCLUSION

Based on the foregoing, it is

**RECOMMENDED** that Defendants’ Motion for Summary Judgment of Invalidity Based on Indefiniteness Under 35 U.S.C. § 112(b) (Docket Entry # 1752) be **DENIED**.

Within fourteen (14) days after receipt of the magistrate judge’s report, any party may serve and file written objections to the findings and recommendations of the magistrate judge. 28 U.S.C.A. 636(b)(1)(C). Failure to file written objections to the proposed findings and recommendations contained in this report within fourteen days after service shall bar an aggrieved party from *de novo* review by the district court of the proposed findings and recommendations and from appellate review of factual findings accepted or adopted by the district court except on grounds of plain error or manifest injustice. *Thomas v. Arn*, 474 U.S. 140, 148 (1985); *Rodriguez v. Bowen*, 857 F.2d 275, 276-77 (5th Cir. 1988).

**SIGNED this 16th day of October, 2014.**

  
CAROLINE M. CRAVEN  
UNITED STATES MAGISTRATE JUDGE